

bursting of his gun early in September, the judicious dietetic treatment enjoined by the surgeon who attended him on that occasion, which had been continued to the present time, had brought him into the most favourable condition for sustaining the ill effects likely to arise from so formidable an injury.

The patient was placed on his back, with the knee slightly flexed: a large poultice applied to the wound, and a full dose of opium given. He passed a quiet night; and in the morning I found him in good spirits, with a quiet and regular pulse, and with merely a slight aching of the knee. No unfavourable symptoms, either local or constitutional, occurred during the progress of the case, nor was his pulse even in any degree accelerated. An anodyne at bedtime for a few nights, and occasional aperients, were the only medicines required. Poultices were continued until granulations began to arise; after which (the remaining small portion of patella having been removed) the surface was dressed with lint dipped in oil, and strips of adhesive plaster were applied in various directions, to assist in approximating the edges of the wound. On the 21st of January, 1839, the wound being quite healed, Mr. M. was able to dress himself, and sit up in a chair. In a short time, with the aid of a suitable splint and bandage, he went upon crutches; and in the middle of March, he came to my house, six miles, on horseback.

He has remained well to the present time, and has long discontinued wearing a splint or any application to the knee. The cicatrix is very firm, and there is considerable motion of the joint; so that Mr. M. can not only walk well without a stick, and even run without much inconvenience, but in November last I saw him dancing quadrilles at a ball in this town.

The foregoing remarkable case is not altogether uninteresting; 1st, As it seems to show to how great an extent we may trust to nature's efforts when assisted by a sound constitution and healthy temperament; and, 2dly, As it tends to confirm the observation of writers on surgery, that large wounds of joints are not so commonly, as small or punctured wounds, followed by severe constitutional disturbance.—*Guy's Hospital Reports*, April, 1840.

41. *Case of Dislocation of the Shoulder-joint, with Fracture of the Humerus.* By J. A. HINGESTON.—Mr. P.—, aged 63, of a spare habit, and in declining health; the muscular structure being slender and feeble.

*Occasion.*—On the 20th of October, 1839, while going down the cellar stairs with some heavy ledgers in both arms, his foot caught against a projection on the edge of the steps, and he tripped and pitched down head foremost. He fell with the left arm stretched out, and at the same time received a blow on the back of the humerus; by which violence, it would seem, the arm was knocked forward; while the head of the bone was pulled backwards by the scapular muscles, the scapula itself being the fulcrum. The head of the humerus was in this manner at once both fractured and dislocated, the fracture traversing the anatomical neck of the humerus.

*Signs.*—A falling down of the left shoulder; empty glenoid cavity; arm close to the side; the patient supporting the elbow of the injured arm in the opposite hand; the palm of the hand of the injured limb lying flat against the stomach (half-supine). On looking at the patient a short distance off, there was a visible protuberance under the clavicle, elevating the pectoral muscles; the axis of the limb, however, not being that of a dislocated shoulder. On examining the shoulder by touch, the head of the humerus was easily perceptible to the fingers of the operator, both under the clavicle and in the axilla. By placing the knee under the axilla, and making the usual extension for reducing dislocation, the operator, while in the act of pressing down the elbow, felt the grating of a fracture under the hand that grasped the shoulder-joint. Then, by grasping the shoulder and dislocated head of the humerus with the fingers of the one hand, and at the same time (the knee being still in the axilla) grasping the elbow with the other hand and jerking the shaft of the humerus upwards and outwards, the grating of the fracture became perceptible, frequent, and unequivocal. On the operator removing his hands and not interfering the least with the injured limb,

but steadily looking at it in front, he could observe (as the patient was very thin) a manifest incongruity between the site of the dislocated head and the axis of the pendulous shaft of the bone. On searching at the top of the bone close to the dislocation and fracture, the fingers of the operator could be slipped into the fissure caused by the fracture between the separated ends of the bone.

The treatment was simply that of supporting the limb in a sling; and of the application of poultices, fomentations, &c. to assuage pain.

The constitutional symptoms set in reluctantly and mildly. The pain was not so great as is usual in cases of fracture through a joint, and sleep was easily obtained by the syrup of poppies. Œdema slowly arose along the whole of the limb; and the back of the arm and parts about the elbow became greatly distended, as well as discoloured from ecchymosed blood.

The position which the patient found he could assume the most easily to himself, was that of sitting up in a chair with the left foot raised on a stool, and the elbow of the injured limb supported on the left knee, with the fore-arm held half-supine by the sound hand against the stomach. The sling round the neck could not be borne while it supported the elbow, but only when suspending the wrist alone.

*Progress and issue of the case.*—As the case proceeded, there was to be remarked a difficulty of supination and extension of the fore-arm, an inability to raise the elbow from the side, and a partial filling up of the glenoid cavity. At this period (December 16) there were all the signs of simple dislocation as true as true could be, with the remarkable fixture of the fore-arm at a right angle across the body. Indeed, if this case, as it then was, had been seen for the first time, the surgeon would, on a *prima-facie* view of it, have had no hesitation in pronouncing it to be an unreduced dislocation; and on this account, the subsidence of the swelling was awaited with some impatience, in order to make a more accurate examination of the condition of the joint.

By the 21st of December (exactly two months after the accident) the shoulder was carefully examined, and a drawing made of it. The condition of the limb was as follows:—

First, The head of the humerus was broken off, and lying under the outer end of the clavicle in front of the coracoid process of the scapula.

Secondly, the glenoid cavity was empty, but somewhat filled up anteriorly by the head of the humerus resting on the anterior edge of the articulating cup.

Thirdly, The fractured end of the shaft of the humerus was touching the under edge of the articulating cup, and lying in *juxta* position to the head of the humerus, but at an obtuse angle with it.

Fourthly, A line was running visibly between the top of the shaft of the bone and its head, with a perceptible depression between the two separated portions of bone, showing the nature of the injury unequivocally.

Fifthly, Coagulable lymph had been thrown out around the injury, but was in progress of absorption.

Sixthly, the belly of the biceps muscle was attenuated, the muscle itself being disabled. It was this disability of the biceps muscle which was the cause of the inability in the movements of the fore-arm; for the following reasons:

(1) The long head of the biceps was interfered with in some manner at its origin in the edge of the glenoid cavity, and probably also the short head at the coracoid process; the tendon having been injured, lacerated, entangled, or thrown out of its groove, so as to render it unserviceable.

(2) The belly of the muscle was wasting, upon the common principle of absorption, in parts becoming useless.

(3) The disability of the muscle prevented the flexion of the fore-arm.

(4) The tonic or indeterminate contraction of the muscle prevented extension of the fore-arm.

(5) The same tonic contraction kept the fascia of the fore-arm "taut," (as sailors call a rope tightly stretched,) by means of the fascial process extending from the biceps tendon just before its insertion into the tubercle of the radius: by being kept thus "taut," the fascia effectually restrained supination.

Of the moveabilities of the limb, there were, 1st, Rotation outwards. 2dly, Extension of the fore-arm. 3dly, Supination: and 4thly, Elevation of the humerus from the side—all existing clearly, in an absolute, though limited degree. There was no union between the fractured head and shaft of the bone: there was an easy, though very limited play of the fractured end of the humerus at the lower edge of the glenoid cavity, and a false joint was probably in a state of formation. This moveability of the broken end of the bone, as well as the existence of the four elementary movements above stated, was quite sufficient to warrant the opinion, that, by the practice of passive motion daily, all the under movements of the shoulder-joint would be recovered.

Before this recovery was accomplished, the patient died, January 23, 1840, three months from the time of his receiving the injury. He sank, worn out by constitutional irritation. All the omens of death settled upon him. Extreme nervous exhaustion, insomnia, very irregular and difficult respiration (orthopnœa), a pulse becoming progressively more and more accelerated, tumultuous and remote action of the heart, thirst, loss of appetite, wasting, delirium, œdema, petechiæ, anasarca, and ascites, only foretold and brought in the inevitable event.

Before this event arrived, he was able to raise his fingers to his lips, and to rest upon the elbow of the injured arm.

Permission was obtained to remove the limb; and the dissection of the parts about the joint presented the following appearances:

The muscles were shrivelled, but free from effusion. Beneath the deltoid, the humerus close to the neck was found to have been broken into six pieces, and united by new bone. The glenoid cavity was seen empty, and covered with its cartilage; the axis of the limb being directed towards it. The head of the humerus was felt beneath the glenoid cavity, resting on the inferior costa, just below the cervix scapulae, with its articulating surface directed downwards. It was closely invested by its capsular ligament, which was entire; the breach caused by the dislocation having been repaired. On opening it, the head of the bone presented its usual appearance, retaining its cartilage, and being smooth and polished. The tendons of the spinati and subscapularis appeared thickened; but were entire, as if they had been torn and repaired. The long tendon of the biceps was torn from its origin, and entangled among the fragments of the fracture, above which it could not be traced.

The motion enjoyed by the articulation was very limited, being restrained by a process of union going on between the glenoid cavity and a fragment of the humerus lying in contact with it. This union was chiefly by means of an imperfectly ossified matter, and therefore allowing a slight degree of motion. This union might probably have been prevented by a continuance of passive motion.—*Guy's Hospital Reports*, April, 1840.

42. *Practical Hints on the Treatment of Strictures.* By BRANSBY B. COOPER, Esq.—By stricture of the urethra is meant a contraction in the calibre of that canal, which causes a difficulty in the expulsion of urine. Strictures have been divided by most authors into permanent and spasmodic; and some have added a third class, which they have termed "mixed strictures." I am inclined to believe, however, that the doctrine of spasmodic strictures has its sole origin in the hypothesis, that the urethra is partially composed of muscular fibres; of which, in my opinion, there is no evidence whatever. Mr. Howship has stated, that he has proved the existence of muscular fibres in the urethra by demonstrating the power of that canal to expel by its own efforts a moderately sized bougie: but this is a power which, in my experience, I must confess I have never seen it exert, except when the bougie was passed up to the bulb, to which a muscular apparatus appertains. Moreover, Sir Charles Bell's experiments sufficiently prove, in my opinion, the non-existence of any muscular action in that portion of the urethra which is anterior to the bulb. The error has doubtless arisen from the circumstance, that the phenomena attending sudden obstruction of the urethra are very similar, but not identical, with the contraction of